



QuantiChrom™ Alkaline Phosphatase Assay Kit

Alkaline phosphatase (ALP) catalyzes the hydrolysis of phosphate esters in an alkaline environment, resulting in the formation of an organic radical and inorganic phosphate. In mammals, this enzyme is found mainly in the liver and bones. Marked increase in serum ALP levels, a disease known as hyperalkalinephosphatasemia, has been associated with malignant biliary obstruction, primary biliary cirrhosis, primary sclerosing cholangitis, hepatic lymphoma and sarcoidosis.

Simple, direct and automation-ready procedures for measuring ALP activity in serum are becoming popular in Research and Drug Discovery. BioAssay Systems' QuantiChrom™ Alkaline Phosphatase Assay Kit is designed to measure ALP activity directly in biological samples without pretreatment. The improved method utilizes *p*-nitrophenyl phosphate that is hydrolyzed by ALP into a yellow colored product (maximal absorbance at 405nm). The rate of the reaction is directly proportional to the enzyme activity.



APPLICATIONS:

Direct Assays: ALP activity in serum, plasma and other sources.

Characterization and Quality Control for ALP production.

Drug Discovery: high-throughput screen for ALP inhibitors and evaluation of ALP inhibitors.

KEY FEATURES:

High sensitivity and wide linear range. Use 5 μL serum or plasma sample. The detection limit is 2 IU/L, linear up to 800 IU/L.

Homogeneous and simple procedure. Simple "mix-and-measure" procedure allows reliable quantitation of ALP activity within 5 minutes.

Robust and amenable to HTS. All reagents are compatible with high-throughput liquid handling instruments.

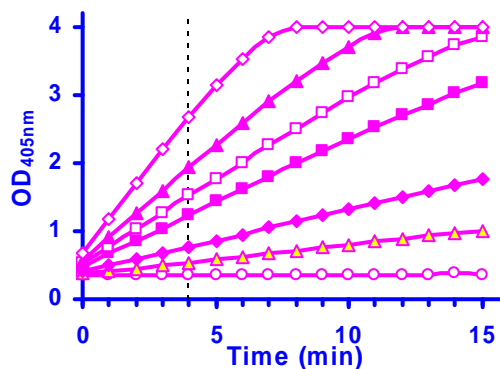
PRODUCT INFORMATION:

QuantiChrom™ Alkaline Phosphatase Assay Kit

DALP-250

Each kit is sufficient for 250 assays in 96-well plate. Kit includes:

- 1 x 50 mL Assay Buffer, pH 10.5
- 1 x 1.5 mL 0.2M Mg Acetate
- 1 x 600 μL pNPP Liquid
- 1 x 10 mL Calibrator



Kinetics of ALP reaction in 96-well plate assay with increasing ALP concentration

REFERENCES:

- [1]. Eaton RH. (1977) Plasma alkaline phosphatase assay: interconversion of results by two methods. *Clin Chem.* 23:2148-50.
- [2]. Ambler J, Arnold DF, Green AG (1970). A study of the alkaline phosphatase activity in some commercial quality control sera with *p*-nitrophenyl phosphate and phenyl phosphate substrates. *Clin Chim Acta.* 27:350-3.
- [3]. Williamson T. (1972). A comparison between the phosphatrate and phenyl phosphate methods of alkaline phosphatase assay. *Med Lab Technol.* 29:182-7.